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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,620	07/17/2003	Hyeong Seog Kim	HI-0157	9656

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EXAMINER

NGUYEN, TU X

ART UNIT	PAPER NUMBER
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2618

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	10/620,620		KIM, HYEONG SEOG	
	Examiner		Art Unit	
	Tu X. Nguyen		2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-14, 19 and 20 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-10, 15, 16 and 21-25 is/are rejected.
- 7) ☒ Claim(s) 6 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed May 26, 2006 have been fully considered but are not persuasive.

In response to Applicants argue "Regarding claim 1, Applicant submits that Van Bokhorst et al. does not disclose or suggest the limitations in the combination of this claim. For example, the Examiner asserts that Van Bokhorst et al. discloses a communication sensitivity checking portion configured to check a sensitivity of at least one communications channel used to communicate with an external access point and to output a sensitivity signal, at col. 2, lines 6-25. However, these portions merely disclose that a selected one of the data communication stations controls the transmission of synchronizing messages to the other communication stations and identifies stations that are to receive data messages, and that the selected stations are controlled to be in an awake state to receive the synchronizing messages and are changed to a doze state following receipt of the synchronizing messages if no data messages are to be received. This is not a communication sensitivity checking portion configured to check a sensitivity of at least one communications channel used to communicate with a external access point and to output a sensitivity signal, as recited in the claims of the present application. These portions of Van Bokhorst et al. merely relate to one station sending synchronization messages to other selected stations where the selected stations are in an awake state in order to receive the synchronizing messages. These portions do not disclose or suggest checking a sensitivity of a communication channel, or outputting a sensitivity signal". The Examiner respectfully

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disagrees, Van Bokhorst et al. disclose receiving traffic indicator message or no receiving data messages reads on "sensitivity signal" with broadest reasonable interpretation. The sensitivity that could be broadly understood as any informations from the access point would provide, to name a few: signal quality measurement, signal strength measurement, sensing no signal from the access point, information detected from the mobile device so that it can make a decision to next step.

Van Nokhorst et al. disclose a two-way communications between a mobile device and an access point (see fig.2-3), the mobile device sending a signal to an access point in active mode, and the access point receiving a signal from the mobile device and proceed to next step for communication is broadly interpret the mobile communication transmits a signal and the signal is a sensed by an access point.

Since the claim limitation "a communication channel" without further detail a type of channel such as dedicated, common or physical channel; in the wireless communication, a communication path between two terminals is inherently describe as a channel, herein, Van Nokhorst et al. disclose broadcast a message to the portable units inherently corresponds to "a communication channel".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 1-2, 4-5, 7-9 and 21-23, are rejected under 35 U.S.C. 102(b) as being anticipated by Van Bokhorst et al. (US Patent 6,192,230).

Regarding claim 1, Van Bokhorst et al. disclose a wireless communications device, comprising:

a communication sensitivity checking portion configured to check a sensitivity of at least one communications channel used to communicate with an external access point (see col.1 line 65 through col.2 line 25, broadcasting messages is considered a communication channel in wireless communication) and to output a sensitivity signal (see col.3 lines 62-66); and

a power mode changing portion configured to change a power mode of the wireless communications device between a working mode and at least one sleep mode based on the sensitivity signal (see col.2 lines 21-25, col.3 lines 62-66).

Regarding claim 2, Van Bokhorst et al. disclose the power mode changing portion is configured to change a power mode of the wireless communications device into a working mode if the sensitivity signal indicates that the communications sensitivity is greater than a predefined reference value (see col.8 lines 44-45), and wherein the power mode changing portion is configured to change a power mode of the wireless communications device into a sleep mode if the sensitivity signal indicates that the communications sensitivity is less than a predefined sensitivity value (see col.8 lines 40-41).

Regarding claim 4, Van Bokhorst et al. disclose the wireless communications device is in the sleep mode, both a transmission portion and a receive portion of the wireless device are put in a power down mode (see col.1 lines 27-29).

Regarding claim 5, Van Bokhorst et al. disclose the power mode changing portion is configured to switch the power mode into a working mode once a predetermined time period elapses after the power mode has been switched to a sleep mode (col.5 lines 24-25).

Regarding claim 7, Van Bokhorst et al. disclose a data checking portion configured to determine whether data needs to be transmitted to an external access point and configured to output a data check signal, and wherein the power mode changing portion is also configured to change a power mode of the wireless communications device based on the data check signal (see col.6 line 42 through col.7 line 14).

Regarding claim 8, Van Bokhorst et al. disclose the power changing mode portion is configured to change a power mode of the wireless communications device into a transmission sleep mode if the data check signal indicates that there is no data to be transmitted, and wherein the power changing mode portion is configured to change a power mode of the wireless communications device into a working mode if the data check signal indicates that there is data to be transmitted (see col.2 lines 21-25).

Regarding claim 9, Van Bokhorst et al. disclose when the wireless communications device is in the transmission sleep mode, only a transmission portion of wireless communications device is in a power down mode (see col.7 lines 36-40).

Regarding claim 21, Van Bokhorst et al. disclose a wireless communications device, comprising: a communication sensitivity checking portion configured to check a sensitivity of at least one communications channel used to communicate with an external access point and to output a sensitivity signal (see col.1 line 65 through col.2 line 25, broadcasting messages is considered a communication channel in wireless communication); and a transmission power

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changing portion configured to change a transmission power of the wireless communication device based on the sensitivity signal (see col.2 lines 21-25, col.3 lines 62-66).

Regarding claim 22, Van Bokhorst et al. disclose if the wireless communications device is adjacent to the external access point, a power output level of a RF amplification block can be transmitted at a much lower level (if is an option and no need for consideration).

Regarding claim 23, Van Bokhorst et al. disclose if the external access point is disposed at the adjacent place, if the signal sensitivity is great, a MAC controller is controlled using a transmission power control signal so that the MAC controller can change the transmission power of the amplifier to a low level (if is an option and no need for consideration).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Bokhorst et al. in view of Willars (US Patent 6,480,476).

Regarding claim 3, Van Bokhorst et al. fail to disclose the predefined sensitivity value can be changed by a user.

In an analogous art, variable sleep cycle, Willars discloses the predefined sensitivity value can be changed by a user (see col.8 lines 42-45). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Van

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Bokhorst et al. with the above teaching of Willars in order to setting the variable sleep mode based on factors of battery resource optimization, desired performance, etc (as suggested by Willars, see col.8 lines 44-45).

Claims 10, 15-16 and 18, are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Bokhorst et al. in view of Lindskog et al. (US Pub. 2002/0132603).

Regarding claim 10, Van Bokhorst et al. fail to disclose wherein the wireless communication device is a wireless LAN module.

In an analogous Art, power saving in WLAN communications, Lindskog et al. disclose wherein the wireless communication device is a wireless LAN module (see par.004). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Bokhorst et al. with the above teaching of Lindskog et al. in order to provide a wireless Ethernet card driving power saving mode for a laptop computer.

Regarding claim 15, Van Bokhorst et al. disclose a wireless LAN communication, comprising:

setting up a communication channel of a wireless LAN networks (see col.8 lines 35-36);
checking a communication sensitivity of the set channel (see col.8 lines 36-37); and
changing a power mode of the wireless LAN module to a sleep mode if the results of the checking step indicate that the communication sensitivity is less than predetermined sensitivity value (see col.8 lines 39-41).

Van Bokhorst et al. fail to disclose wherein the wireless communication device is a wireless LAN module.

In an analogous Art, power saving in WLAN communications, Lindskog et al. disclose wherein the wireless communication device is a wireless LAN module (see par.004). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Bokhorst et al. with the above teaching of Lindskog et al. in order to provide a wireless Ethernet card driving power saving mode for a laptop computer.

Regarding claim 16, the modified Van Bokhorst et al. disclose changing a power mode of the wireless LAN module back to a working mode after a predetermined delay period expires after the wireless LAN module is set to the sleep mode (see Van Bokhorst et al., col.8 lines 44-45).

Regarding claim 18, the modified Van Bokhorst et al. disclose checking to determine if data must be transmitted by the wireless LAN module (see Van Bokhorst, col.4 lines 29-30); and changing a power mode of a transmission block of the wireless LAN module to a sleep mode if the results of the checking step indicate that no data must be transmitted (see Van Bokhorst, col.4 lines 29-31).

Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haartsen (US Patent 6,574,266) in view of Van Bokhorst et al.

Regarding claim 24, Haartsen discloses a power management method of a wireless LAN module (see col.7 lines 23-29, remote terminal corresponds to WLAN module), comprising:

setting up a communications channel of a wireless LAN network (see col.7 lines 42-44).

Haartsen fails to disclose changing a transmission power of the wireless LAN module based on the communications sensitivity.

In the related art, Bokhorst et al. disclose changing a transmission power of the wireless LAN module based on the communications sensitivity (see col.2 lines 21-25, col.3 lines 62-66). Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Haartsen with the above teaching of Bokhorst et al. in order to provide a lower power consumption in mobile transceiver when it receives no messages from an access point.

Allowable Subject Matter

Claims 11-14 and 19-20 are allowed.

Claims 6 and 17, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding dependent claim 6, the prior arts fail to teach "the length of the predetermined time period varies based on the value of the predefined sensitivity value", as cited in the claim.

Regarding dependent claims 11 and 19, the prior arts fail to teach "the switching means is also configured to switch the power mode of the wireless LAN module to a normal mode after a predetermined delay period elapses after the power mode has been set to the power down mode", as cited in the claim.

Regarding dependent claim 17, the prior arts fail to teach "if the checking means determines that a communications sensitivity is less than a predetermined sensitivity value, the switching means switches the power mode of the wireless LAN module to a normal mode after

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a first predetermined delayed period elapses after the power mode has been set to the power down mode, and wherein the checking means determines that a communications sensitivity is less than a second predetermined sensitivity value, the switching means switches the power mode of the wireless LAN module to a normal mode after a second predetermined delay period elapses after the power mode has been set to the power down mode", as cited in the claims.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

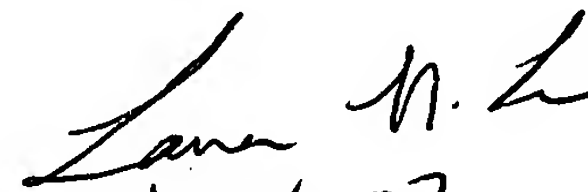
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Nguyen whose telephone number is 571-272-7883.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


December 29, 2006


1-08-07
LANA LE
PRIMARY EXAMINER